

Desired Topic:

This project will be a single-family home residence. This residence will be at 3337 Sherman Drive in Lancaster, South Carolina, in the Riverchase Estates neighborhood. Riverchase Estates is a gated community with custom new build residences. This residence is a new build, which means that it has no previous site location.

Design Philosophy & Statement:

I chose to do this structure because I'm very interested in residential design, and since my parents have wanted to move, the topic of building a house has come up as an option instead of house hunting. This structure will be a new build, so it has no existing structure or any needed updates to the current design.

I was drawn to Beverly Willis' work because of the use of humanism in her designs, which reflects the desires of her clients through their perception and sensation of the spaces they want her to create. In design, making a space more functional has always been my number one priority, and creating a cohesive aesthetic that doesn't feel disjointed from the rest of the space. I want to make the spaces that people love and enjoy functional to experience those spaces to their fullest potential. I would say that while design is a valuable career skill, I'm also compelled to design. Sometimes when I walk into a room, and it's not functional or aesthetically pleasing, I begin imagining what I change to improve the space. I think that design is a reaction because it is either renovating or demolishing the current state of a space to create something new or making room for something new where nothing exists yet brought on by an idea. I gravitate towards modern farmhouse, rustic, and nature aesthetics. If I had to describe my design style, it would be a mixture of modern farmhouse and artisan. I like this combination of design styles because they reflect a sense of quaint comfort that reminds me of my childhood home and what I envision the style of future dream house having.

Works by Architects/Designers I'm Inspired By:

Joanna Gaines



Beverly Willis



Anita Yokota

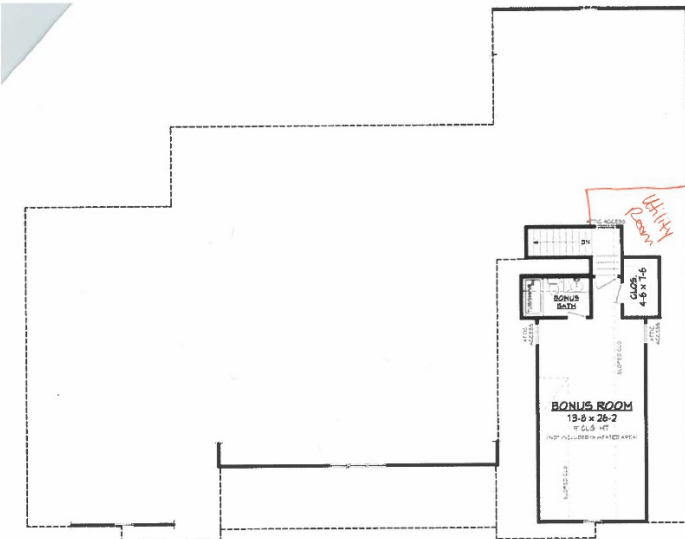
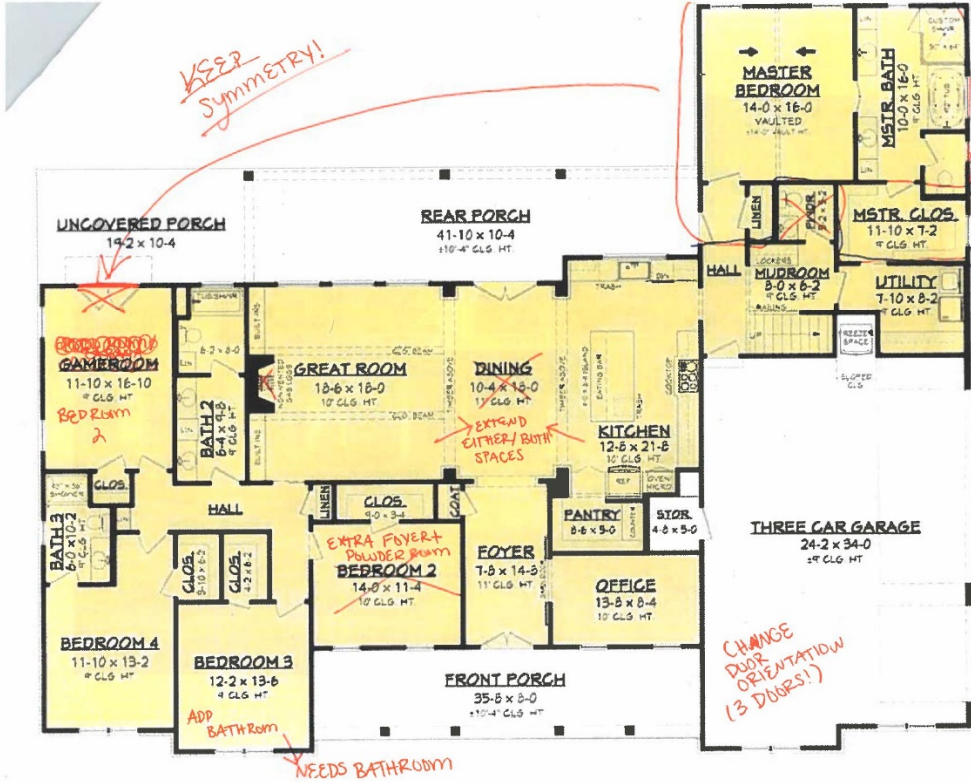


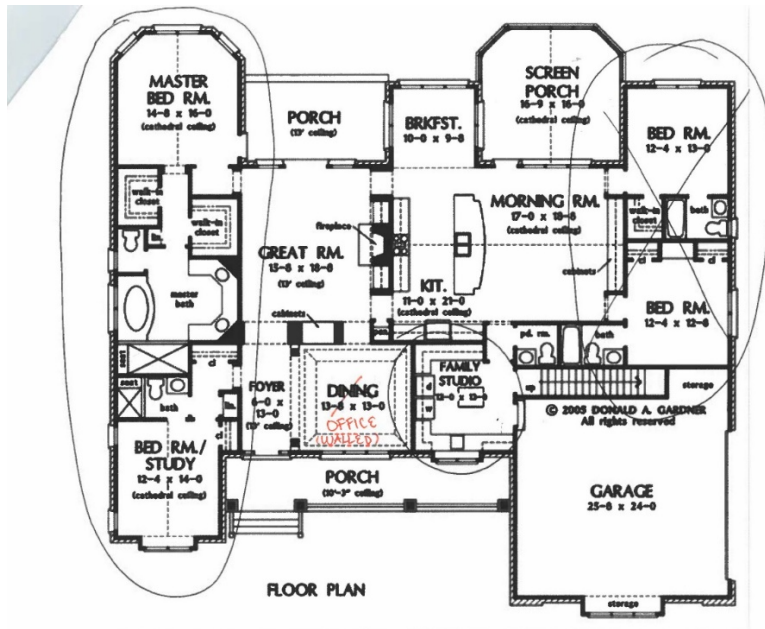
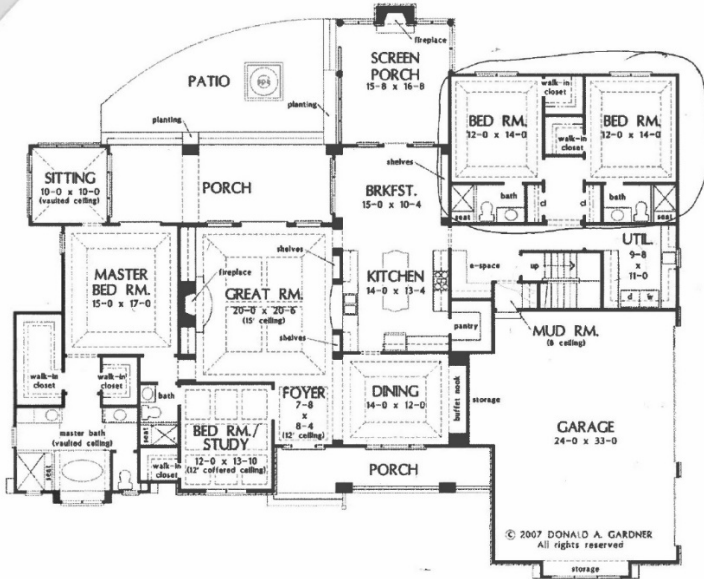
Jenny Marrs

Floor Plan & Basic History of the Building:

My floor plan that I have created takes elements from three different floor plans that altogether fit the needs of the space. This is a new build of a residence.

These floor plans are the basis of my design, since my project is a new build. The design concept is mainly based on the first set of plans, with elements from the following two included to make the design meet the needs for the clients.





What is Known About the Structure & Information Given?/Analyzing Existing Structure & Determining Needs:

Square Footage:

- Total: 6,207 ft²
 - Heated: 3,631 ft²
 - Unheated: 2,576 ft²

Codes:

Classification:

- The building's classification is R3. The classification won't change because it is a new build of a single-family residence.

Minimum Square Footage & Ceiling Height Requirements:

- Minimum area of a habitable room (except for a kitchen) is 70 sq ft
- Minimum ceiling height is 7'-0" above the finished floor.
 - Certain rooms, such as bathrooms and laundry rooms, can have a ceiling height of 6'-8".

Means of Egress:

- There must be a minimum of one regulated exterior door.
 - One of the few specifications about the location of the door is that it can't exit through a garage.
 - It must have a minimum clear width of 32"/2'-8" and a clear height of 78"/6'-6" with a specific type of landing on both sides.
 - Other doors to the exterior are allowed to have smaller widths.
 - All exterior doors must be easily operable with the need for a key to exit.
- The width of interior doors isn't regulated, but the recommended minimum by code is 3'-0".
 - In habitable attics and sleeping areas within a residence, there must be an emergency means of egress.
 - This can either be an operable window or door to the outside.
 - The bottom of the window can't be more than 44"/3'-8" above the floor so that a person can easily reach it. The window must also have a clear opening of a certain area and minimum height and width dimensions that allows a person to exit through the window in case of a fire or other emergency.
 - Egress windows from floors above the grade level are required to be slightly larger than those from the ground floor.
- Stairs and ramps within a residence are regulated similarly to those in commercial occupancies; however, there are some differences.
 - Handrails are required on only one side of a stairway.

Fire and Smoke Resistance:

- In single-family residences, exterior walls in certain locations require fire resistant construction. The most common separation requirement pertains to attached garages.
 - A 1-hour assembly must separate any part of the garage that connects to the house, including walls and ceilings.
 - Any door between the garage and the living space must be fire-rated as well as self-closing and self-latching.

- Throughout the family dwelling, fire-blocking is required in concealed openings to form an effective fire barrier between each story and the top story and attic space.
 - Fire-blocking is also required when a clothes dryer exhaust duct penetrates a floor or ceiling membrane.

Fire Protection:

- All new homes must have smoke alarms that consist of smoke detection and an alarm-sounding appliance.
 - They must be interconnected and tied into the electrical system with battery backup. These detectors are required to be interconnected so that if a detector indicates smoke in one area, all the detectors will sound.
 - Typically, smoke alarms are required in each sleeping room, outside of each sleeping area, outside of a bathroom with a shower or bathtub, on all habitable floors (including attics), and in basements and garages.
- Carbon monoxide detectors or alarms are also now required in certain instances.
 - They are required when the residence includes a “fuel-fired” appliance (gas powered appliances) or has an attached garage.
 - In new construction, when required, a carbon monoxide detector or alarm must be installed directly outside of each separate sleeping area.

Plumbing:

- The minimum requirements for plumbing fixtures in family residences typically include one kitchen sink, one water closet, one lavatory, one bathtub or shower unit, and one washing machine hookup.
 - In addition, each water closet and bathtub or shower unit must also be installed in a room with privacy.

Electrical & Communication:

- All habitable rooms require a wall switch to control lighting either an outlet for a lamp or an overhead light fixture.
- Stairways must include at least one light fixture with a wall switch at each floor level.

Finishes and Furnishing:

- Finishes in shower and bath areas are regulated. These areas must have finishes with a smooth, hard, or non-absorbent surface.
 - If glazing is used, safety glass is typically required.